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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,420	09/23/2003	Tsafrir Ben-Ari	26/562	1094

7590 06/22/2004

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EXAMINER

SWARTHOUT, BRENT

ART UNIT	PAPER NUMBER
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2636

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/667,420

Applicant(s)

BEN-ARI ET AL.

Examiner

Brent A Swarthout

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

i. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebert et al. in view of Alpers.

Ebert discloses an aircraft weapons system comprising missile and inherent launcher (col.4, line 24) , cuing system with wireless communication link (col.5, line 11) to control direction (col.7, line 46) and designate a target (col.8, lines 11-15), and controller means for directing missile in desired direction and releasing the missile (col.8, lines 11-24), except for specifically stating that a seeker is used for locking the missile onto a target.

Alpers teaches desirability of using a seeker to enable a missile to find a target and to release a seeker at a desired time (abstract, col.5, lines 28-42).

It would have been obvious to use seeker means as suggested by Alpers in conjunction with a system as disclosed by Ebert, in order to correct for tracking errors once a missile approached a target, thus increasing accuracy.

Regarding claim 2, interface 20 of Ebert allows deployment of missiles (col.4, lines 59-61) wirelessly( col.5, lines20-25).

2. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebert et al. in view of Alpers and Maguire, Jr.

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Maguire discloses using a helmet position measurement system with eye gaze detection in an aircraft.

It would have been obvious to use eye gaze measurement as suggested by Maguire in conjunction with a system as disclosed by Ebert and Alpers, in order to allow helmet position to be used to track objects in an aircraft weapons system.

Regarding claim 5, Ebert teaches wireless tracking of direction of missile (col.7, line 46; col.8, lines 11-24).

3. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebert et al. in view of Alpers, and further either in view of Maguire, Jr. and Takeyama, or Takeyama.

Takeyama discloses comparing objects with eye-gaze position, and providing audible confirmation when they are within a certain range (abstract, col.4, lines 28-31; col.4, line 61- col.5, line 10).

It would have been obvious to detect object position relative to eye-gaze direction and give an audible alert as suggested by Takeyama, in conjunction with a weapons system as set forth by Ebert, Alpers and Maguire, in order to allow a pilot to recognize that a target was in a viewing angle, thus making it easier to acquire targets.

4. Claims 8-10, 14 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire, Jr. in view of Takeyama.

Maguire teaches use of an eye gaze detection system which is compared to a helmet reference, which is in turn compared to a vehicle reference, for accurately tracking eye position of a user, except for specifically stating that an audio output is given when eye gaze direction corresponds to an element visible to a user.

Takeyama teaches desirability of giving an audible alert when an object corresponds to eye-gaze direction of a pilot.

It would have been obvious to utilize an audible alert as suggested by Takeyama in conjunction with an eye-gaze system as suggested by Maguire, in order to provide earlier notification that a target was acquired.

5. Claims 11,12,16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire, Jr. in view of Takeyama and Hergesheimer.

Hergesheimer teaches desirability of notifying a pilot if a detected aircraft is a friend or foe (col. 3, lines 3-7).

It would have been obvious to include friend or foe Identification as suggested by Hergesheimer in conjunction with a system as disclosed by Maguire and Takeyama, in order to allow a pilot to determine is a detected aircraft should be fired on with a weapon system or not.

6. Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire, Jr. in view of Takeyama and Hamilton et al.

Hamilton teaches desirability of providing landmark information to a pilot in a helmet mounted system (Fig.7).

It would have been obvious to provide audible alert when near a landmark as suggested by Hamilton in a system as disclosed by Maguire and Takeyama, in order to alert a pilot to specific conditions near the aircraft, such as obstructions, in order to provide safer flight.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire, Jr. in view of Takeyama and Kinder.

Kinder teaches desirability of having a pilot's eye position used to lock a missile on a target that is being looked at (col.1, lines 27-30).

It would have been obvious to use audible alert means when a user's eye gaze was for locking a missile on a target as suggested by Kinder in conjunction with a system as disclosed by Maguire and Takeyama, in order that a pilot could confirm that a correct target was being locked on, in order to avoid destroying the wrong aircraft.

8. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gauggel, Lemelson and Ben-Ari disclose aircraft weapons control systems.

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

a. Claim 15 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,667,694 in view of Maguire, Jr. and Takeyama. Ben-Ari discloses desirability of providing an audible alert when a reference direction and eye-gaze direction are within a certain degree of closeness, and to provide audio confirmation when a weapons system is locked on a target.

Maguire and Takeyama teach desirability of using a helmet mounted system to track degree of closeness to a desired reference, in order to provide an audible alert to a user.

It would have been obvious to use a helmet system as opposed to an eye-gaze system as disclosed by Ben-Ari to indicate audibly that a reference was in range, in order to simplify the detection of a pilot's view, since a pilot's view would generally be aligned with helmet direction.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent A Swarthout whose telephone number is 703-305-4383. The examiner can normally be reached on M-F from 6:30 to 4:00.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass, can be reached on 703-305-4717. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brent A Swarthout  
Examiner  
Art Unit 2636

**BRENT A. SWARTHOUT  
PRIMARY EXAMINER**